

# **LOW FLOW, LOW STRESS, OR MICROPURGE GROUNDWATER SAMPLING - AN UPDATE AND ANSWERS TO COMMON QUESTIONS**

## **Abstract**

In the past ten years since the initial research has been published, many practitioners are implementing alternatives to fixed volume purging and sampling. While the general consensus in the scientific community is that these new sampling techniques can produce superior data and save operating costs, confusion still exists in some cases regarding application and applicability of the methods. Application of the techniques has been inconsistent, and several questions have repeatedly arisen that are not explicitly addressed by the original literature. Common issues include the definition of low-flow, low-stress, and Micropurge; the significance of drawdown during sampling; comparability of data collected with these techniques to that collected with older techniques; significance of well diameter; pump placement in long-screened wells; and "where the water comes from" during sampling. This presentation will address these common questions, relay some lessons learned over years of practical application, and present results of numerical modeling demonstrating "where the water comes from" as well as data illustrating the effect of drawdown in low-yield wells.

Mark D. Varljen

SCS Engineers

[mvarljen@scsengineers.com](mailto:mvarljen@scsengineers.com)

p:425-746-4600

f:425-746-6747